

October 8, 2004

**ASARCO BLACK PINE MINE  
2004-2005 INTERIM AND FINAL RECLAMATION PLANS  
FOR THE COMBINATION MINE AREA  
FINAL ENVIRONMENTAL ASSESSMENT  
AND  
FORMAL APPROVAL OF AMENDMENT 006 TO OPERATING PERMIT 00063**

Dear Reader:

This is the Final Environmental Assessment (EA) and formal Approval of Amendment 006 to Operating Permit 00063 for interim and final reclamation plans for ASARCO's Black Pine Mine. ASARCO proposed a revised reclamation plan to address water quality problems associated with the Combination Mine waste rock dump area on the Black Pine Mine site in 2002. A draft EA published on August 17, 2004 evaluated the potential impacts from the proposed interim reclamation to be completed in 2004 and 2005. The Montana Department of Environmental Quality (DEQ) and the USDA Forest Service, Pintler Ranger District (USFS) have adopted the draft EA as the final EA for Amendment 006 for the interim reclamation to be completed in 2004 and 2005 and the final reclamation plan.

One public comment letter was received on the draft EA and responses were prepared (see Attachment A). As a result of that letter, revisions were made to three agency modifications and stipulations. Those changes are shown in Attachment B. Additions to the draft EA text for these items are shown in underlined italics and deletions are shown as ~~strike-outs~~.

**The agencies concluded that the Agency Mitigated Alternative would not produce a significant impact and selected it as the approved alternative (See Attachment B). The agencies gave ASARCO verbal approval to proceed with the reclamation.**

Copies of this document and its attachments can be obtained by writing or calling the Montana Department of Environmental Quality c/o Patrick Plantenberg, P. O. Box 200901, Helena, MT 59620, telephone (406) 444-4960; e-mail address

[pplantenberg@state.mt.us](mailto:pplantenberg@state.mt.us). The Final EA will also be posted on the DEQ web page: [www.deq.state.mt.us](http://www.deq.state.mt.us).

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Warren D. McCullough, Chief  
Environmental Management Bureau

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Date

2 Attachments:

Attachment A: Responses to Comments on the Draft EA For the Interim and  
Final Reclamation Plans Black Pine Mine  
Attachment B: Changes to Draft EA Text

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## **ATTACHMENT A**

### **Responses to Comments on the Draft EA For the Interim and Final Reclamation Plans Black Pine Mine**

Responses to comments on the August 17, 2004 draft EA for interim and final reclamation plans at the Black Pine Mine.

1. Modification #9: It is not necessary to replace 3 or 4 feet of material in areas where contaminated soil was totally removed (i.e. soil concentrations less than 50 ppm). Regrading with a 12" layer of growth medium should be sufficient.

*Agencies' response:* The agencies do not want the regrading and reclamation of the trenches to result in a drainage way that would concentrate storm water runoff. Therefore, it may be necessary to place variable depths of soil back in the trenches to avoid that. Where the copper concentration is less than 50 ppm copper, 12 inches of soil is sufficient for reclamation unless doing so creates a depression where water would collect or steepen the slope in the drainage such that it would move more water faster and potentially result in erosion and loss of the replacement soil. Final soil replacement depths in and grades above the trenches would be subject to field approval by agency staff.

On USFS lands all trenches must be regraded and filled with soil material of which at least the top 6 inches must be suitable topsoil to approximate original contour. Compliance with this requirement must be field verified by DEQ and USFS staff.

2. Modification #11: There are currently no gutters on the remaining buildings. ASARCO does not intend to install gutters. An additional liner and additional fill at the buildings is not necessary. When the liner was installed in July 2004, it was extended up the wall of each building and placed behind the metal siding. In places where there were concrete aprons and sidewalks, the liner was tucked under the edge of the concrete. Adding 12" more material would block access to the existing doorways into the buildings.

*Agencies' response:* This stipulation was based on what ASARCO submitted in its permit amendment application. The application stated that gutters would be installed. The agencies believe that the typical amount of snowfall in the area collecting on the roofs would tear off the gutters when the snow began to slide down the roofs. ASARCO's statement that it does not intend to install gutters will suffice for a commitment not to install gutters. The diagrams for liner installation in the application showed it being buried in a trench adjacent to the buildings, not attached to the buildings, and thus there was potential for seepage into the waste rock between the liner and the building. Although ASARCO did not follow its own specifications, the method of installation adequately addresses this issue. Modification and Stipulation 11 have already been fulfilled by ASARCO.

3. Modification #16: ASARCO sees no need to line the toe ditches with PVC liner. It is our intention to line the ditch with the low permeability material used on the face of

the dump. To the extent water seeps through this material, it would be collected by the seepage collection system that is in place.

*Agencies' response:* This stipulation was based on what ASARCO submitted in its permit amendment application. The agencies would like to minimize the amount of water that would be intercepted by the seepage collection system and either have to be pumped back into the mine or treated if water quality remains such that treatment is necessary. The low permeability material should work well on the face of the dump where vegetation would be using water in the soil and the slope would reduce the opportunity for water to soak in and saturate the soil above the low permeability layer. However, the road ditch has a much gentler slope, which allows storm water more opportunity to soak into the ground. The low permeable material would still allow some water to seep down to the collection system and a synthetic liner would not unless it was damaged and developed leaks. According to George Furniss, DEQ staff hydrologist, the ditch is cleaned out once or twice a year to remove sediment and a liner could be damaged by that activity. DEQ would agree that no liner would be required until vegetation is established and sediment from the reclaimed slope has been largely reduced. At that time, if large amounts of water are still being captured by the seepage collection system, then the ditch would be lined to minimize the amount of storm water runoff that seeps down into the collection system.

4. Modification #18: ASARCO has no intention or budget to install backup power. This has not been a significant issue to date. A more significant issue was the reliability of the pumps. The pumpback system has been upgraded with the installation of the lined pond in 2003 and new stainless steel pumps in 2004.

*Agencies' response:* The quality of the pumps has nothing to do with the availability of power to run the pumps. In lieu of an on-site backup generator, ASARCO must install an alarm system that would notify the ASARCO employee in Philipsburg of a power failure at the mine. In the event of a power failure, ASARCO would obtain a generator and get it to the site within 24 hours to keep the pumps running until power is restored.

## **ATTACHMENT B**

### **Changes to Draft EA Text**

“Modification 9: It would not be practicable to require excavation to excessive depths in the Combination Soils area. If the copper concentration at the bottom of the 3-foot trench dug to remove contaminated Combination Soils ranged between 50 and 300 ppm, then no additional contaminated soil would need to be removed as few plant roots reach deeper than 3 feet. If the concentration is 50 ppm copper or less then ASARCO could place a minimum of 12 inches of suitable growth medium over the regraded trench on private property. This may only be done if doing so would not create a depression that would pond storm water or result in creating a steeper slope resulting in erosion of the placed soil material. DEQ would field specify where more fill would be required to avoid those problems. On USFS lands ASARCO would then place 3 feet of soil material from the borrow area in the excavated trench to achieve approximate original contour.

New paragraph

If the copper concentration at the bottom of the 3-foot trench dug to remove contaminated Combination Soils exceeded 300 ppm, an additional foot of contaminated material would be removed from the trench before the trench was backfilled with a minimum of 12 inches of clean soil material but no more than 4 feet of clean soil material according to the same requirements. If soil contamination is still more than 50 ppm at the bottom of the deepened trench then it must be back filled with 4 feet of clean soil material. This would provide an additional buffer against upward migration of copper into the rooting zone. The top 42 6 inches would be rocky topsoil as defined in Modification 12c. This would provide sufficient soil depth such that most plant roots would not come in contact with the contaminated soils. Removal of soils would not extend into the downslope wetland areas unless otherwise approved by USFS staff.

Stipulation 9: If the copper concentration in the contaminated Combination Soils area were greater than 300 ppm at 3 feet, then ASARCO would excavate an addition foot of contaminated soils. A minimum of one foot of clean rocky growth medium would be placed in the trench if the contamination at the bottom of the trench is 50 ppm copper or less on private property. More growth medium may be required if DEQ determines that placing just one foot in certain areas would result in ponding of storm water or creating a steeper drainage that would actively channel storm water resulting in erosion of the replaced medium. If the contamination is more than 50 ppm, then 3 Three or 4 feet of clean growth medium would be replaced in the trench depending on how deep the trench was excavated according to these limits. The USFS requires that all trenches excavated on USFS lands be filled back to the original contour prior to excavation. The agencies will verify final soil placement depths and slopes. The top 42 6 inches of soil would be comprised of rocky topsoil as per Stipulation 12c, below.”

"Modification 11: The installation of gutters on the buildings as proposed in ASARCO's application would provides a focused discharge point at the base of the gutters. The force of water draining at these points could erode the cap beneath the downspout. In addition, the amount of snow pack at the site that collects on the roof could rip off or damage the gutters. ASARCO and the agencies agree that the The gutters would not be eliminated installed. The connection of the PVC liner to the buildings as proposed in ASARCO's application needs to be modified to reduce the potential for water to seep between the building and the liner into the waste rock beneath and to reduce the potential for erosion from the gutter downspouts by allowing the snow to just slide off the roof and melt on the reclaimed and lined surface. ASARCO solved this problem by attaching the cap liner to the buildings' outer walls and covering the attached liner with clean soil material.

Stipulation 11: ASARCO will not install ~~would eliminate~~ the gutters on the buildings as described in its permit revision application. ASARCO will attach the cap liner to the building rather than tucking it into a trench around the buildings as described in its permit revision application. ~~At the buildings, the adjacent diversion in which the edge of the PVC liner was placed would be filled in with a layer of clean soil material and covered with another liner attached to the building like a shingle to overlap the PVC liner for the cap and slope away from the buildings. The second liner would be covered with at least 1 foot of rocky, non-erosive soil material to prevent damage from sunlight."~~

"Modification 16: Several items specified in ASARCO's Erosion Control Plan for 2003 were not implemented. Those items need to be completed in order to achieve the level of erosion control needed at the Combination Mine.

- a. After the revegetation on the Combination Mine waste rock dump has become permanently established and is successfully controlling soil erosion on the slopes, The agencies will evaluate data collected on the seepage collection system to determine if the ditch is contributing to the collected seepage. If so then the ~~The~~ toe diversion below the waste rock will be lined with PVC as specified by ASARCO in its Erosion Control Plan for 2003 ~~and was not done~~. Lining of this diversion along the roadside would reduce the amount of water reaching the underground seepage collection system.
- b. The sediment basins at the lower end of the trenches dug to remove contaminated soils in the Combination Soils area need to be constructed to trap water and sediment and prevent them from reaching wetlands on USFS lands. The basins would be located on ASARCO property adjacent to the USFS boundary.

Stipulation 16: ASARCO will implement two items specified in its Erosion Control Plan for 2003 Reclamation Activities (Hydrometrics 2003b).

- a. After the Combination waste rock dump vegetation has become permanently established and has stabilized the waste rock dump slopes. The agencies will review data from the seepage collection system to determine if ASARCO would line the unlined toe diversion, also referred to as the runoff collection or roadside ditch below the waste rock dump, is allowing storm water runoff to seep down to the collection system. If it is contributing water to the system and sediment in the ditch is no longer being cleaned out on a regular basis. ASARCO will line the toe diversion with PVC as described in its Erosion Control Plan for 2003 Construction Activities (Hydrometrics 2003b).
- b. ASARCO will construct the sediment basins at the end of the reclaimed trenches in the Combination Soils area in 2005."